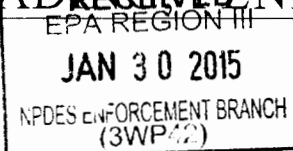




CITY OF READING, PENNSYLVANIA



PUBLIC WORKS
503 N. 6TH STREET
READING, PA 19601
(610) 655-6236

RALPH JOHNSON, P.E.
PUBLIC WORKS DIRECTOR

January 27, 2015

Certified Mail
Return Receipt Requested

Ms. Margaret L. Hutchinson, Esq.
Assistant United States Attorney
Civil Division Eastern District of Pennsylvania
615 Chestnut Street
Suite 1250
Philadelphia, PA 19106-4476

Re: City of Reading Consent Decree
Calendar Quarterly Progress Report
4th Quarter 2014

Dear Ms. Hutchinson:

In accordance with Section VI Reporting Requirements, Paragraph 41, you will find enclosed the City of Reading's Calendar Quarterly Report. This report documents progress and status on the implementation of Section V Remedial Measures described in Paragraphs 7 through 40. Please feel free to contact me at 610-655-6502 should you have any comments or questions.

Sincerely,

Ralph E. Johnson, P.E.
Public Works Director

REJ/ts

Enclosure

C: Christopher A. Day, Esq., US EPA
Lisa Trakis, US EPA
Gary Hepford., PA DEP
Shawn Arbaugh, PA DEP
Carole Snyder, Managing Director
Deborah A.S. Hoag, P.E., Utilities Systems Manager
Amy Morriss, Acting WWTP Manager
Anthony C. Vesay, P.E., Hill International
Keith Mooney, Esq., Legal Counsel
John J. Miravich, Esq., Fox Rothschild
file



**City of Reading Consent Decree
Calendar Quarterly Progress Report
Period Ending December 31st, 2014**

V. REMEDIAL MEASURES

A. General Duties

7. Duty to Comply with Permit – The City's wastewater treatment plant (WWTP) was in compliance with the NPDES permit parameters.

8. Operation and Maintenance of the Facility – No change. The operation and maintenance ongoing program is implemented.

B. Interim Measures

9. Interim Compliance – Environmental Management System

(b) Maintenance Management System – No change. The WWTP computerized maintenance management system (CMMS) ongoing program is implemented.

(c) Supervisory Control and Data Acquisition (SCADA) System

1. Upgrades to the Interim SCADA System – No change. The WWTP SCADA system ongoing program is implemented and is periodically updated as appropriate.

2. Upgrades to the SCADA System – No change. This measure will be addressed under the Wastewater Treatment Plant upgrade.

(d) Pretreatment Data Management System – Continuing progress.

The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.

10. Interim Plant Influent Monitoring – No change. The plant influent monitoring ongoing program is implemented.

11. Interim Trickling Filter Performance Measures

(a) Performance Improvements – No change. The trickling filter performance measures ongoing program is implemented.

12. Process Control Testing – No change. The process control testing ongoing program is implemented.

13. Dangerous Gas Detection – No change. The gas detection ongoing program is implemented.

14. Certified Plant Operators – No change. The ongoing 24/7 qualified supervisor coverage is implemented.

15. Operations and Maintenance Plan – No change. The operations and maintenance plan remains in place and is annually reviewed and updated as appropriate.

16. Staffing Plan – No change. The ongoing 24/7 supervisor coverage is implemented. The ongoing communication process is implemented.

17. Interim Wet Weather Operational Strategy – No change. Please see the wet weather operation plan.

C. Long Term Evaluation and Construction Schedule – In addition to the Wastewater Treatment Plant this remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning.

The 42" flow-meter replacement project is complete.

The 42" force main project is complete.

The Sixth and Canal Pump Station Phase I design is continuing on schedule. The 60% design was submitted by T&M November 25th, 2014 Review comments were submitted by Hazen and Sawyer on December 22nd, 2014.

Proposals for the Sixth and Canal Pump Station Phase II design services were received. Negotiations with several bidders are presently being conducted, with an award of the project anticipated in January.

The Anaerobic Digester Rehabilitation project at the Wastewater Treatment Plant is continuing on schedule. Activities occurring in the 4th quarter include: mobilization, removal of the remaining sludge in digester #4, removal of the digester #4 cover, repairs to the digester #4 cover (ongoing), and sandblasting the interior of digester #4. The project currently stands at 23% completion.

The Improvements to the Fritz Island WWTP project design by Rummel, Klepper & Kahl, LLP (RK&K) of York, PA is progressing. In order to maintain schedule, the project has been split into two components – liquid treatment facilities upgrade and solids treatment facilities upgrade. The liquid facilities design has progressed and 100% design documents were delivered November 14th, 2014, with peer review comments being submitted by Hazen and Sawyer on December 5th. The solids facilities 90% design documents were delivered on October 12th 2014 and the 100% design documents were delivered December 20th. The PADEP WQM Part II permit application was submitted on June 30, 2014. The DRBC permit application was submitted and is listed on the DRBC's June 2014 Notice of Applications Received (NAR). A meeting with PADEP was held on April 28, 2014 at which time the changes to the project were presented. We will determine if another PADEP 537 plan update and consent decree paragraph 18 and 19 updates are required. The City and RKK believe we will be able to make up the time delay and still maintain the project bid schedule. The City is pursuing PennVEST funding and bonds for this project.

The City has issued a Request for Proposals Phase I: Statement of Qualifications for Construction Management for Consent Decree Projects and, separately, for Program Management for Consent Decree Projects. The City desires to separate the two functions that are currently contained under one contract and to enhance the PM services by incorporating higher level program management coupled with

coaching and guiding of City staff so that they can perform the lower level tasks. Bids received August 29th were rejected. Rebid of the contract is anticipated to occur in January.

18. Treatment Plant Alternatives Submission

(a) **Existing Plant Process Evaluation Report** – No change.

(b) **Evaluation of Treatment Alternatives Report** – There are no additional revisions to the WWTP design presently being considered. If required, an additional update to the Evaluation of Treatment Alternatives will be submitted along with an updated 537 Planning Special Study.

19. Capital Improvements Plan – No change at this time.

20. Request for Proposals – An RFP for Construction management will be issued in January.

21. Permit Applications and Design –The WWTP Upgrade project's PADEP WQM Part II Permit application was submitted to PADEP on June 30, 2014. Comments and technical deficiencies were received from PADEP on December 18th. These comments were addressed on January 5th, 2015. The WQM Part II Permit is expected by the end of January.

The WWTP Upgrade project's DRBC permit application was submitted and is listed on the DRBC's June 2014 Notice of Applications Received (NAR). The Secondary Digester Rehabilitation project's DRBC permit application was approved on June 11, 2014.

22. Permitting – No report.

23. Construction Completion – No report.

24. Start-Up and Operation – No report.

D. Collection System

25. GIS Mapping System - In progress. See below.

(a) **Purpose of GIS System** - Not applicable.

(b) **GIS Mapping of the Sanitary Sewer Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues working to improve the accuracy of the information and ensuring the information is tracked as changes are made to the collection system impacting the GIS. The City has been using CCTV and magnetic locating as well as cross-referencing between design plans, GIS, and aerial imagery to investigate and resolve inconsistencies to update the database. Discussions have and will continue to include the continual updating and long-term maintenance of the database.

(c) **GIS Mapping of the Storm Water Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues improving the accuracy of the information and ensuring the information is kept current as changes are made to the collection system that impacts the GIS.

26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the coordination of the collection system investigative, modeling, and rehabilitative work.

Hazen & Sawyer continued evaluating the data from various sources to complete the evaluation of the inflow and infiltration into the City's system by subareas.

1. Baseline Flow and Rainfall – In Progress. Flow metering was conducted in 2005 and temporary flow meters were placed in the system again in December 2013. Data collection began mid-December with the flow meters and rain gauges in the system through almost the end of March. All flow and precipitation data were received by Hazen & Sawyer during the second quarter of 2014 for evaluation and inclusion.

2. Hydraulic Modeling – In Progress. City Council awarded a contract with Hazen & Sawyer for an enhanced scope of services to include this and other collection system engineering support on October 14, 2013. The hydraulic model was developed and a dry weather calibration was performed using the 2005 flow data. Further calibration for wet weather was completed with the new flow, weather, and pump station data.

(b) Sewer System Evaluation Survey – In Progress. The sanitary manhole numbering system is refined continually as field work shows additional or missing manholes and will continue to do so. Hazen & Sawyer has refined subareas with the newer GIS data used as the base. The computerized maintenance management system implementation project progressed to go live with full-scale geospatially-oriented tracking of preventive and corrective maintenance as well as repairs. The City and Woolpert worked together on software configuration for service requests, work orders, and projects to track personnel, equipment, materials, and contractors. The asset relationship for certain activities is being reviewed where there is not a City asset to associate with the work. Options for tracking this work in the CMMS are being evaluated with other users and integrators being contacted.

After soliciting and evaluating proposals, the City awarded a contract to Woolpert to inspect and evaluate the sanitary sewer intermunicipal connection points and flow meters. Woolpert performed field investigation and observations at the points as determined through the Act 537 planning and intermunicipal agreement mapping processes. The connection point locations mapped by SSM Group were distributed for municipal review to be finalized with the municipalities prior to the connection point and flow meter report being finalized. Additional changes were incorporated based upon review and comment. A combined report including the SSM connection point mapping and Woolpert evaluation was sent to each municipality for review and comment. Several municipalities sent comments for review by the City and

consultants and will be transmitted to the other impacted municipalities prior to finalizing the reports. Some municipalities signed a certification statement on the accuracy of the information as presented.

On April 11, 2014, the City received proposals for Closed Circuit Television (CCTV) and Manhole (MH) Inspection On-Call Service Contracts, and City Council awarded to all four proposers at their April 14th meeting. CCTV inspection work in specific subareas is currently assigned to RedZone Robotics. By August 30th, RedZone CCTV'd 1377 pipe segments for as total of 247,443 lineal feet of sanitary sewer inspected in Phase 1 and 1385 pipe segments for total of 250,662 lineal feet inspected in Phase 2 per invoices submitted. The NASSCO PACP-coded data is being reviewed and evaluated by Hazen and Sawyer (H&S) for the SSES and Rehabilitation Plan. Data and database issues have been encountered on the initial August 30th submission as well as additional subsequent ones. As of this writing, a complete PACP-compliant database has NOT been received for use in developing the SSES as required. The City has placed RedZone on notice for breach of contract for the failure to perform and continues to work to obtain a compliant database. The City finalized a contract with Mr. Rehab for manhole inspections in the Phase 1 and 2 areas as determined from the flow monitoring. With the assistance of H&S, the pilot inspection data was reviewed to be MACP compliant.

27. Rehabilitation Plan – No progress. *The SSES is required to be complete in order to develop the Rehabilitation Plan.*

28. Rehabilitation of Priority Areas of Collection System – No progress. *The rehabilitation plan is the precursor of this.*

29. Wet Weather Operation Plan – Completed.

E. Pretreatment Program

30. General Duty – In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.

31. Enforcement Response Plan (ERP) Implementation – In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers.

32. ERP - Penalty Escalation and Compliance Schedule – In progress and continuing. The City continues escalating penalties for all industries that are in significant non-compliance for a given parameter for two consecutive quarters. As penalty escalation had not been detailed in the ERP, the City has documented the process and amounts for consistency and as a reference tool.

33. ERP – Order, Permit Revocation, and Federal Referral – In progress. The City continues escalating the enforcement actions focusing on the financial penalties assessed to permittees who remain in significant non-compliance. The City continues to confer with US EPA while attempting to have industries achieve compliance. One industry has been problematic for an extended time following completion of a recent compliance agreement. US EPA requested additional information from the industry and has been speaking with the City regarding this

permittee's recent compliance. The City met with an industry representative in 2012 to discuss recent compliance and plans for long-term attainment. The industry installed an automated skimming system they believe will address their non-compliance for oil and grease. In 2013, another phase of pretreatment was constructed with space allocated for further pretreatment if necessary. Since the system has been on-line, their compliance has improved to sporadic violations with decreasing frequency and inconsistent noncompliance instead of SNC. The City continues to closely monitor this industry for compliance.

34. Local Limit Adoption by Contributing Municipalities – In progress. All the municipalities with permitted industries have adopted the ordinance. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. This requirement is detailed in the revised intermunicipal agreement being reviewed and executed by the contributing municipalities. This is reiterated in the annual request for information to complete the requisite annual system operations report.

35. Non-Residential Connection Evaluation and Investigation – In progress. The City has been working with the contributing municipalities to obtain this information periodically to summarize, survey, and evaluate nonresidential users in the service area that may need to be permitted. A standardized method for routine reporting will be developed in cooperation with the municipalities under the new intermunicipal agreement.

36. Increased Monitoring for Violators – In progress and continuing. The City continues to increase City sampling and encourage increased voluntary self-monitoring for industries with violations. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits require increased frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is tracked and reported annually. The merits of increased self-monitoring are routinely discussed as industries are encouraged to do so to avoid SNC and publication.

37. Pretreatment Computerized Management System - In progress and continuing. The City continues data entry into a commercial pretreatment database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.

38. Local Limits Re-Evaluation – Completed. Evaluation submitted to US DoJ and US EPA on May 5, 2006. Comments were received from US EPA and the City initially worked with B&V to address the comments and concerns. The City's renewed NPDES permit, effective December, 2013, includes requirements for local limits re-evaluation. The local limits sampling plan for the collection system was developed with some locations being modified slightly to be more representative of the system as a whole and to reflect new service area additions. The City formally documented the sampling locations for a local limits site sampling plan focusing on the collection system locations and incorporated the industries as well. The treatment plant sampling plan locations were used as discussed previously, and the sampling and analysis has been completed. Simultaneously, the City developed and issued an RFP for local limits

development and pretreatment support. Due to some personnel issues, the RFP issuance was delayed and proposals will not be received until October 30th.

39. Quarterly SNC Reports to US EPA – In progress. With all the reports submitted for the first quarter, we were pleased that no SIUs were in SNC. For the second quarter, there were six SIUs in SNC of which only two were directly due to the sampling. The others were due to failures to report or resample. The City monitors penalty payment status and will continue to investigate errors in the penalty payment and posting as reported to the US EPA. The City continues working interdepartmentally to resolve and ensure accurate tracking and reporting in all systems. We will continue to work to resolve this issue as specific entries and adjustments have been identified. There continue to be industries that are not current with their payment, but they are decreasing in number on the specific pretreatment report and overall when doing the investigative reviews. The City has been making follow-up calls to those who are delinquent to prompt payment.

F. Funding

40. Funding – In progress. As was presented previously, the City has separated the City Retail Sewer Fund from the Sewer Fund that addresses the entire system. This accounting change allows the City to keep storm water expenses separate from sanitary sewer expenses and ensure the City is paying appropriately into the Sewer Fund for the City's retail customers per the new intermunicipal agreements. The formal separation was approved by City Council with the actual accounts being created as necessary. The 2015 budget was presented to City Council with the new fund separation and the budgeted transfer amount from the Sewer Fund to the General Fund remaining at \$3,000,000. In order to stabilize finances, this transfer will be taken periodically throughout the year.

VI. REPORTING REQUIREMENTS

41. Report Contents and Certification

- (a) Remedial Measures Paragraphs 7 through 40** – See above numbered sections.
- (b) Anticipated Problems** – See italics in above numbered sections.
- (c) Additional Matters** – See italics in above unnumbered sections.
- (d) Certification Statement** –

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

Ralph E. Johnson

Public Works Director

01/26/15
Date

Hazen & Sawyer

City of Reading Collection Systems Engineering Support

This Progress Report covers the period from October 1, 2014 through December 31, 2014 for engineering services related to the City of Reading Collection System Support.

Primary efforts during this time period included the following activities:

Task 1 - Hydraulic Modeling and Capacity Evaluation

- Continued capacity evaluation of the City's interceptors including the connection point's from contributing municipalities.
- Reviewed potential "hot spots" of capacity limited area's against pipe condition ratings for potential causes.
- Further calibration for wet weather was completed with 2013-14 flow data.
- Meetings, teleconferences and coordination with the City occurred throughout the reporting period.

Task 2 – Temporary Flow Metering

- This task is complete.

Task 3 – Calibration of Hydraulic Model

- This task is complete.

Task 4 – I/I Evaluation

- This task is complete.

Task 5 – Capacity Analysis and Assurance

- Capacity analysis under current and future conditions continued during this quarter.

Task 6 – Condition Assessment and System Investigation

- CCTV of Priority 2 sewers was substantially completed during this reporting period.
- Review and evaluation of CCTV data for Priority 1 and Priority 2 basins continued during this quarter.
- Pipe collapse and blockages observed within the system via CCTV review were reported to the City once identified.
- Worked with the City and their lawyers in obtaining trustworthy, reliable data from the City's CCTV consultant, RedZone Robotics throughout this reporting period.

Task 7 – Sanitary Sewer Evaluation Survey

- H&S provided the City the SSES report on December 5, 2014. Comments received on the report will be incorporated in Chapter 3 of the rehabilitation plan, for which the SSES report is made part of.

Task 8 – Manhole Inspection and Evaluation

- Assisted the City in negotiating a contract for manhole inspections.
- Notice to proceed for manhole inspections was issued to Mr. Rehab for the inspection of Priority 1 and Priority 2 basin manholes (approx. 2100 MH) on October 1, 2014.
- Coordinated with Mr. Rehab on receiving the manhole inspection reports.
- Mr. Rehab has provided reports for 1237 out of 2113 manholes within this reporting period.

Task 9 – Rehabilitation Plan

- Began drafting sections and developing cost tables that will be made part of the rehabilitation plan.
- Reviewed 2008-09 smoke testing data.
- Began working with the City in identifying programs and implementation schedule to be made part of final plan.

Task 13 – Technical Standards, Specifications and Construction Details

- Continued working with the City in identifying standard details and specifications needed to support work associated with rehabilitation projects.

**City of Reading
Wastewater Treatment Plant Upgrades
PM/CM Monthly Progress Report
Hill/Weston/Hazen and Sawyer**

November 2014

Project # PPH—00948

Hill International Invoice #73 Includes:
Duane Morris Invoice: (No Billings November 2014)
Hazen and Sawyer Invoice: (No. 000072 November 2014)
Weston Invoice: (No Billings November 2014)

Administrative Notes:

Notice to Proceed issued on September 9, 2008;
Project Kickoff meeting held September 15 2008.
The PM/CM contract was signed on Nov. 11, 2008.
Reconciliation Amendment I signed April 11, 2011
Reconciliation Amendment II signed Dec. 7, 2011
Reconciliation Amendment III signed Sep.14, 2012
Reconciliation Amendment IV signed Sep.28, 2012
Reconciliation Amendment V signed Aug.5, 2013
Reconciliation Amendment VI signed Apr. 29 2014

Executive Summary:

The Project Management/Construction Management (PM/CM) team continued work on Consent Decree related tasks as well as other supporting Wastewater Treatment Plant (WWTP) tasks. Critical work items for November included: continued design oversight work (review of 90% Solids and 100% Liquids design submittals) for the WWTP upgrades, responding to bidder questions for the 6CPS Phase II designer procurement, construction management services for the secondary digesters (project kickoff) and ongoing project management/controls tasks integrating the effort.

Anticipated work for December includes: continued design oversight work (review of RKK's 100% Liquids design) for the WWTP upgrades and 6CPS Phase I project, construction management of the secondary digesters project, and ongoing project management/controls tasks integrating the effort.

A more detailed task breakdown of the November work effort is included in the respective PM/CM's subcontractor invoices/reports.

Project Management (Hill: also see invoice):

- PM Administration functions: Project team coordination/integration including action item review, correspondence, and deliverables status.

Project Controls (Hill: also see invoice):

- Performed required Project Controls functions: Prepare and review agenda for client meetings, Attendance at City Manager Updates on 11/24; Coordination with the project team and City including action item review, Review and comment upon RKK's 100% Liquids Cost Estimate, Coordination with project team regarding contract administration, including: Task Order support including updating of the PM/CM Tasks Costs spreadsheet, and Monthly Report preparation.

WWTP Design Oversight – 60% thru 100% (H&S: also see invoice)

- Completed a technical review of RKK's 90% solids design
- Began the review of RKK's 100% Liquids design

- Coordination with RKK, City, and PM/CM Team

6CPS Phase II Designer RFQ/RFP (H&S: also see invoice):

- Reviewed and provided City with draft responses to bidder's questions
- Coordination with City and PM/CM Team

Secondary Digesters CM Services (Hill):

- On site construction management services
- Correspondence with City and contractor relating to electrical permit
- Review of outstanding contractor submittals, including baseline schedule, and applications for payment
- Visit Spring Township WWTP
- Prepared and conducted project meetings

**ENGINEER'S MEMORANDUM OF PROJECT STATUS
ANAEROBIC DIGESTER REHABILITATION PROJECT
CITY OF READING**

November 1, 2014

Prepared by T&M Associates, Inc.

1. **Project Schedule:** Reference is made to the electronic project schedule, 19th update of the baseline, submitted to the City of Reading and Hill International along with this report on 11/3/14 (dated 10/31 /14). The schedule reflects a 3 week project completion delay as a result of the delay in the beginning of the fabrication of the combined heater/heat exchanger. Comments from Hill on September's schedule are summarized as follows:

“Continue to coordinate with RK&K, so plant operations (MOPO) are maintained, the plant meets permit, any design-related conflicts are resolved, and site logistics are coordinated. Reevaluate the completion of Activity #132 – Solids Contract Notice of Award – for the WWTP; assign a predecessor activity.”

T&M has been coordinating with RK&K and the City throughout the design process regarding the overall facility upgrade project, and we are continuing close coordination as we move into construction. A construction coordination meeting(s) may be necessary with RK&K (not presently within T&M's scope of services). T&M will confirm the completion date of Activity #132 with RK&K and obtain a predecessor activity from RK&K.

“Perform contracted, construction related services – review shop drawings, answer RFIs, process pay application, assist/coordinate with the digesters' construction inspector, etc. – throughout this phase.”

T&M is currently performing the above duties per the contract with the City.

2. **Completed Tasks – Project Schedule Update:** As of 10/31/14, under “Construction Engineering Services”, Task Nos. 114, 115, 119, and 121 (Digester #4 cleaning) have been completed. Task No. 116 “Shop Drawing Review” and Task No. 128 “Response to RFIs” are in progress.

3. Project Update:

- a) T&M attended a scheduling conference conducted by Hill on 10/3/14.
- b) Power has been provided to the job trailer by the electrical contractor.
- c) Digester No. 4 was drained and sludge contents removed. Pay quantity for residual sludge removed to be based on final sludge level at 12.25 feet from bottom manway to top of sludge blanket.
- d) Lead abatement work has been substantially completed.

4. Current Schedule Status:

- a) T&M will continue shop drawing review and responding to contractor RFIs.

5. Project Schedule Immediate Milestones (November):

- a) T&M will coordinate with Evoqua on scheduling inspection of Digester #4 cover.
- b) T&M will perform inspection of Digester #4 cover with the manufacturer and the City following the cover removal and placement on cribbing.

Schedule Status Memorandum Page 2

6. Action Item on Schedule and Immediate Milestones:

The General Contractor shall provide updated delivery date for the long lead time equipment. The delay in the submission of the shop drawing for the combined heater/heat exchanger results in a projected project completion delay on the schedule, which may be rectified during the fabrication period.

END OF REPORT

ENGINEER'S MEMORANDUM OF PROJECT STATUS
ANAEROBIC DIGESTER REHABILITATION PROJECT
CITY OF READING
December 1, 2014
Prepared by T&M Associates, Inc.

1. **Project Schedule:** Reference is made to the electronic project schedule, 20th update of the baseline, submitted to the City of Reading and Hill International along with this report on 12/1/14 (dated 11/28/14). *The schedule reflects a 17-day project completion delay based on the (18th schedule update) as a result of the delay in the beginning of the fabrication of the combined heater/heat exchanger.* Comments from Hill on September's schedule are summarized as follows:

“Continue to coordinate with RK&K, so plant operations (MOPO) are maintained, the plant meets permit, any design-related conflicts are resolved, and site logistics are coordinated. Reevaluate the completion of Activity #132 – Solids Contract Notice of Award – for the WWTP; assign a predecessor activity.”

T&M has been coordinating with RK&K and the City throughout the design process regarding the overall facility upgrade project, and we are continuing close coordination as we move into construction. A construction coordination meeting(s) may be necessary with RK&K (not presently within T&M's scope of services). T&M will confirm the completion date of Activity #132 with RK&K and obtain a predecessor activity from RK&K.

“Perform contracted, construction related services – review shop drawings, answer RFIs, process pay application, assist/coordinate with the digesters' construction inspector, etc. – throughout this phase.”

T&M is currently performing the above duties per the contract with the City.

2. **Completed Tasks – Project Schedule Update:** As of 11/28/14, under “Construction Engineering Services”, Task Nos. 114, 115, 119, 121 and 122 have been completed. In progress are the following tasks: Task No. 116 “Shop Drawing Review”, Task No. 117 “Fabrication and Delivery of Heat Exchangers”, Task No. 118 “Fabrication and Delivery of Linear Motion Mixers”, Task No. 120 “Interior Building Modifications”, Task No. 123 “Digester No. 4 Cover Rehabilitation”, and Task No. 128 “Response to RFIs”.
3. **Project Update:**
 - a) Lead abatement work has been completed.
 - b) T&M continues to review shop drawings and respond to RFIs.
 - c) T&M attended the job meeting on 11/26/14.
 - d) T&M observed Eastern's initial attempt to remove the cover. The following is a partial account of the attempted cover removal: Eastern initiated operations to remove the cover in the morning of 11/25/14. A 550-ton crane was positioned on the west side of the secondary digester complex (in front of the building). The total weight of the cover with ballast, as provided by the manufacturer (Evoqua), is 130 tons. The manufacturer provided a breakdown to the contractor for individual cover component weights, and the contractor calculated the weight of the cover with ballast and top plating removed at approximately 70 tons. The contractor spent several hours adjusting and aligning the rigging. At approximately 1:30pm, the operation was called off after the contractor observed that the weight of the cover, as measured by the crane, is heavier than

previously anticipated and calculated. If all weights from the manufacturer were accurate the cover removal should have been feasible. The contractor was not comfortable with the marginal factor of safety based on his observations so the pull was postponed. One possible cause for the apparent overweight cover is that regular concrete was used in place of the lightweight perlite insulation on the ceiling plate. The approach moving forward is to remove the concrete insulation layer by 12/1/14 and pull the cover on 12/2/14. This will not harm the cover and should facilitate its removal from the tank.

4. **Current Schedule Status:**

- a) T&M will continue shop drawing review and responding to contractor RFIs.

5. **Project Schedule Immediate Milestones (December):**

- a) T&M will perform inspection of Digester #4 cover with the manufacturer and the City following the cover removal and placement on cribbing, which has been tentatively scheduled for 12/12/14.

6. **Action Item on Schedule and Immediate Milestones:**

The General Contractor shall provide updated delivery date for the long lead time equipment. The delay in the submission of the shop drawing for the combined heater/heat exchanger results in a projected project completion delay on the schedule, which may be rectified during the fabrication period.

END OF REPORT

ENGINEER'S MEMORANDUM OF PROJECT STATUS
6th & CANAL PUMP STATION (6CPS) – SHORT TERM IMPROVEMENTS
PROJECT

December 1, 2014

Prepared by T&M Associates, Inc.

1. Project Schedule: Reference is made to the third update of the approved baseline schedule, submitted to the City of Reading along with this report on 12/1/14 (dated 11/26/14). The baseline schedule was accepted by Hill on 9/2/14, and comments on the second update were received from Hill on 12/1/14, with the following review recommendations:

- ☐ Refrain from altering Original Durations – Updates should be accomplished by inserting the Actual Start, % complete, and/or Actual Finish.
- ☐ If during the update, it becomes apparent that more time is required to complete a task than was planned and shown as the Original Duration, Industry standard is to modify the Remaining Duration for that task.
- ☐ Continue to refine the schedule and add more detail as the design progresses, Replace long lags (durations over 10 days) with activities.
- ☐ Continue to submit monthly schedule updates.

T&M acknowledges the above schedule review comments and will incorporate them accordingly.

2. Completed Tasks – Project Schedule Update: As of 11/28/14, T&M has completed project schedule Task No. 29 (60% Design Phase) and Task No. 31 (Submit 60% Design). As discussed with the City at the 30% design review meeting, Task No. 30 “code determination and code meeting”, will be conducted following 60% design review and approval.

3. Project Update:

- a) T&M received written 30% design review comments from Hazen & Sawyer on 10/27/14.
- b) T&M addressed written 30% design comments from the City and Hazen & Sawyer in the 60% design submission.

4. Current Schedule Status:

- a) The 60% design phase has been completed on time.

5. Project Schedule Immediate Milestones (December):

- a) T&M will meet with the City on 12/9/14 to review the 60% design.
- b) T&M will coordinate with the City to schedule a “one stop shop” meeting with City codes and fire department upon 60% design approval.

6. Outstanding Information Required and Action Items:

T&M requests manufacturer’s information (shop drawing or record drawing) on the VFD panels. The capacity of the exhaust fans is required in order to balance cool air flow to the cabinets. This item will be incorporated as an Alternate on the Bid Form, per City direction.

7. Upcoming Project Milestones:

T&M will incorporate 60% design review comments.

8. T&M Action Item on Meeting the Upcoming Project Milestones:

T&M does not foresee any concerns at this time with meeting upcoming project milestones.

END OF REPORT

ENGINEER'S MEMORANDUM OF PROJECT STATUS
6th & CANAL PUMP STATION (6CPS) – SHORT TERM IMPROVEMENTS
PROJECT

January 2, 2015

Prepared by T&M Associates, Inc.

1. Project Schedule: Reference is made to the fourth update of the approved baseline schedule, submitted to the City of Reading along with this report on 1/2/15 (dated 12/31/14). The baseline schedule was accepted by Hill on 9/2/14, and comments on the second update were received from Hill on 12/1/14, with the following review recommendations:

- ☐ Refrain from altering Original Durations – Updates should be accomplished by inserting the Actual Start, % complete, and/or Actual Finish.
- ☐ If during the update, it becomes apparent that more time is required to complete a task than was planned and shown as the Original Duration, Industry standard is to modify the Remaining Duration for that task.
- ☐ Continue to refine the schedule and add more detail as the design progresses, Replace long lags (durations over 10 days) with activities.
- ☐ Continue to submit monthly schedule updates.

T&M acknowledges the above schedule review comments and will incorporate them accordingly.

2. Completed Tasks – Project Schedule Update: As of 12/31/14, the following tasks have been completed: Task No. 31, 32, 33, 35, 36, and 37. As discussed with the City at the 30% design review meeting, Task No. 34 “code determination and code meeting”, will be conducted following 60% design.

3. Project Update:

- a) T&M met with the City on 12/9/14 to review 60% design comments. Meeting minutes were issued later that day.
- b) T&M received 60% design comments from Hazen & Sawyer on 12/22/14.
- c) T&M is addressing all received design comments in the preparation of the 90% design plans and specifications.
- d) T&M obtained part number information for the existing SCADA system.
- e) T&M contacted Brian Nicarry and scheduled a meeting with the “One Stop Shop” City code review board for 1/15/15 at 11:00am.

4. Current Schedule Status:

- a) The 60% design phase was completed on time and the project is on schedule.

5. Project Schedule Immediate Milestones (January):

- a) T&M will attend a “one stop shop” meeting with City codes and fire department.
- b) T&M will have a telephone conference with the City and OCC to clarify equipment control protocols and scope of SCADA system upgrades.
- c) T&M will prepare 90% design

6. Outstanding Information Required and Action Items:

T&M requests manufacturer’s information (shop drawing or record drawing) on the VFD panels. The capacity of the exhaust fans is required in order to balance cool air flow to the cabinets. This item will be incorporated as an Alternate on the Bid Form, per City direction. Schedule Status
Memorandum Page 2

7. Upcoming Project Milestones:

T&M will incorporate all 60% design review comments and prepare plans and specifications for submission in February.

8. T&M Action Item on Meeting the Upcoming Project Milestones:

T&M does not foresee any concerns at this time with meeting upcoming project milestones.

END OF REPORT



CITY OF READING, PENNSYLVANIA

PUBLIC WORKS
503 N. 6TH STREET
READING, PA 19601
(610) 655-6236

RALPH JOHNSON
ACTING PUBLIC WORKS DIRECTOR

April 28, 2015

Certified Mail
Return Receipt Requested

Ms. Margaret L. Hutchinson, Esq.
Assistant United States Attorney
Civil Division Eastern District of Pennsylvania
615 Chestnut Street
Suite 1250
Philadelphia, PA 19106-4476

Re: City of Reading Consent Decree
Calendar Quarterly Progress Report
1st Quarter 2015

Dear Ms. Hutchinson:

In accordance with Section VI Reporting Requirements, Paragraph 41, you will find enclosed the City of Reading's Calendar Quarterly Report. This report documents progress and status on the implementation of Section V Remedial Measures described in Paragraphs 7 through 40. Please feel free to contact me at 610-655-6236 should you have any comments or questions.

Sincerely,

A handwritten signature in black ink that reads "Ralph E. Johnson".

Ralph E. Johnson, PE
Acting Public Works Director

REJ/ts

Enclosure

C: Christopher A. Day, Esq., US EPA
Lisa Trakis, US EPA
Shawn Arbaugh, PA DEP
Gary Hepford, PA DEP
Carole Snyder, Managing Director
Deborah A.S. Hoag, P.E., Utilities Systems Manager
Anthony C. Vesay, P.E., Hill International
Keith Mooney, Esq., Legal Counsel
John J. Miravich, Esq., Fox Rothschild
file



FAX: (610) 655-6697 TDD: (610) 655-6442

**City of Reading Consent Decree
Calendar Quarterly Progress Report
Period Ending March 31st 2015**

V. REMEDIAL MEASURES

A. General Duties

7. Duty to Comply with Permit – The City's wastewater treatment plant (WWTP) was in compliance with the NPDES permit parameters.

8. Operation and Maintenance of the Facility – No change. The operation and maintenance ongoing program is implemented.

B. Interim Measures

9. Interim Compliance – Environmental Management System

(b) Maintenance Management System – No change. The WWTP computerized maintenance management system (CMMS) ongoing program is implemented.

(c) Supervisory Control and Data Acquisition (SCADA) System

1. Upgrades to the Interim SCADA System – No change. The WWTP SCADA system ongoing program is implemented and is periodically updated as appropriate.

2. Upgrades to the SCADA System – No change. This measure will be addressed under the Wastewater Treatment Plant upgrade.

(d) Pretreatment Data Management System – Continuing progress.

The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.

10. Interim Plant Influent Monitoring – No change. The plant influent monitoring ongoing program is implemented.

11. Interim Trickling Filter Performance Measures

(a) Performance Improvements – No change. The trickling filter performance measures ongoing program is implemented.

12. Process Control Testing – No change. The process control testing ongoing program is implemented.

13. Dangerous Gas Detection – No change. The gas detection ongoing program is implemented.

14. Certified Plant Operators – No change. The ongoing 24/7 qualified supervisor coverage is implemented.

15. Operations and Maintenance Plan – No change. The operations and maintenance plan remains in place and is annually reviewed and updated as appropriate.

16. Staffing Plan – No change. The ongoing 24/7 supervisor coverage is implemented. The ongoing communication process is implemented.

17. Interim Wet Weather Operational Strategy – No change. Please see the wet weather operation plan.

C. Long Term Evaluation and Construction Schedule – In addition to the Wastewater Treatment Plant this remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning.

- The 42” flow-meter replacement project is complete.
- The 42” force main project is complete.
- The Sixth and Canal Pump Station Phase I design is moving forward. The 100% design is completed and all comments have been incorporated. The specifications have been completed and the project is ready to be bid.
- The Sixth and Canal Pump Station Phase II design, which was awarded to RK&K, is proceeding. The first deliverable, which is the Preliminary Design Report, was submitted in draft form on March 25th. The document is currently being reviewed.
- The Anaerobic Digester Rehabilitation project at the Wastewater Treatment Plant is proceeding. Activities occurring in the first quarter include:, repairs to the digester #4 cover, sandblasting and painting the interior of digester #4, removal of old process piping, and the installation of the heat exchangers and linear motion mixer on Digester 4.
- The improvements to the Fritz Island WWTP project design by Rummel, Klepper & Kahl, LLP (RK&K) of York, PA is progressing. In order to maintain schedule, the project has been split into two components – liquid treatment facilities upgrade and solids treatment facilities upgrade. The liquid facilities design has progressed and 100% design documents and specifications are completed. The liquids portion of the project is currently out for bids. The solids facilities 100% design documents were delivered December 20th. The solids portion of the project is currently ready to go out for bids. The PADEP WQM Part II permit application was received on January 29, 2015. The DRBC permit application was submitted and is listed on the DRBC's June 2014 Notice of Applications Received (NAR). A meeting with PADEP was held on April 28, 2014 at which time the changes to the project were presented. We will determine if another PADEP 537 plan update and consent decree paragraph 18 and 19 updates are required. The City and RKK believe we will be able to make up the time delay and still maintain the project bid schedule. The City is pursuing PennVEST funding and bonds for this project.
- The City has issued a number of Request for Proposals, namely, Statement of Qualifications for Construction Management for Consent Decree

Projects and, separately, for Program Management for Consent Decree Projects. The City desires to separate the two functions that are currently contained under one contract and to enhance the PM services by incorporating higher level program management coupled with coaching and guiding of City staff so that they can perform the lower level tasks. Rebid of the contract was conducted in March and is currently in the negotiation stage.

18. Treatment Plant Alternatives Submission

(a) Existing Plant Process Evaluation Report – No change.

(b) Evaluation of Treatment Alternatives Report – There are no additional revisions to the WWTP design presently being considered. If required, an additional update to the Evaluation of Treatment Alternatives will be submitted along with an updated 537 Planning Special Study.

19. Capital Improvements Plan – No change at this time.

20. Request for Proposals – An RFP for Construction management was issued in February and an RFP for Project Management was issued in March.

21. Permit Applications and Design – The WWTP Upgrade project's DRBC permit application was submitted and is listed on the DRBC's June 2014 Notice of Applications Received (NAR).

22. Permitting – The WWTP Upgrade project's PADEP WQM Part II Permit application was received on January 29th, 2015. The Secondary Digester Rehabilitation project's DRBC permit application was approved on June 11, 2014.

23. Construction Completion – No report.

24. Start-Up and Operation – No report.

V. REMEDIAL MEASURES

B. Interim Measures

9. Interim Compliance – Environmental Management System

(d) Pretreatment Data Management System – Continuing progress.

The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.

D. Collection System

25. GIS Mapping System - In progress. See below.

(a) Purpose of GIS System - Not applicable.

(b) GIS Mapping of the Sanitary Sewer Collection System – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues working to improve the accuracy of the information and ensuring the information is tracked as changes are made to the collection system impacting the GIS. The City has been using CCTV and magnetic locating as well as cross-referencing between design plans, GIS, and aerial imagery to investigate and resolve

inconsistencies to update the database. Internal discussions include the procedures for continual updating and maintenance of the database.

(c) GIS Mapping of the Storm Water Collection System – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues improving the accuracy of the information and ensuring the information will be kept current as changes are made to the collection system that impacts the GIS.

26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the collection system investigative, modeling, and rehabilitative work. Hazen & Sawyer continued evaluating the data from various sources to complete the evaluation of the inflow and infiltration into the City's system by subareas.

1. Baseline Flow and Rainfall – In Progress. System-wide flow metering was conducted in 2005 and temporary flow meters and rain gauges were placed in the system again from December 2013. through March 2014. All flow and precipitation data were received by Hazen & Sawyer for evaluation and inclusion.

2. Hydraulic Modeling – In Progress. City Council awarded a contract with Hazen & Sawyer for an enhanced scope of services to include this and other collection system engineering support on October 14, 2013. The hydraulic model was developed and a dry weather calibration was performed using the 2005 flow data. Further calibration for wet weather was completed with the new flow, weather, and pump station data. As discussed during a technical meeting, we will arrange for a demonstration of the model upon request.

(b) Sewer System Evaluation Survey –Completed and ongoing. The sanitary manhole numbering system is refined continually as field work shows additional or missing manholes and will continue to do so. Hazen & Sawyer has refined subareas with the newer GIS data used as the base. The computerized maintenance management system implementation project progressed to go live with full-scale geospatially-oriented tracking of preventive and corrective maintenance as well as repairs. The asset relationship for certain activities is being reviewed where there is not a City asset to associate with the work, such as a clog on a lateral pipe. Options for tracking this work in the CMMS are being evaluated, and the City implemented a new service request tracking system in 2015 which may provide some reporting and trending options while not linking to an asset in the GIS.

After soliciting and evaluating proposals, Woolpert performed field investigation and observations at the sanitary sewer intermunicipal connection points and flow meters as determined through the Act 537 planning and intermunicipal agreement mapping processes.

The connection point locations mapped by SSM Group were distributed for municipal review to be finalized with the municipalities prior to the

connection point and flow meter report being finalized. Additional changes were incorporated based upon review and comment. A combined report including the SSM connection point mapping and Woolpert evaluation was sent to each municipality for review and comment. Several municipalities sent comments for review by the City and consultants and some municipalities signed a certification statement on the accuracy of the information as presented. Remaining follow-up and update needs are being evaluated to ensure their accuracy.

On April 11, 2014, the City received proposals for Closed Circuit Television (CCTV) and Manhole (MH) Inspection On-Call Service Contracts. CCTV inspection work in specific subareas was assigned to RedZone Robotics. RedZone CCTV'd 1377 pipe segments in Phase 1 and 1385 pipe segments in Phase 2. The NASSCO PACP-coded data was reviewed and evaluated by Hazen and Sawyer (H&S) for the SSES and Rehabilitation Plan. Data and database issues were encountered on multiple submissions. A 'final' compliant database including a total of 507,672 lineal feet of pipe CCTV'd was received with both the summary data and selected videos reviewed for inclusion in the SSES report to develop the Rehabilitation Plan.

The City finalized a contract with Mr. Rehab for manhole inspections in the Phase 1 and 2 areas as determined from the flow monitoring. With the assistance of H&S, the pilot inspection data was reviewed to be MACP compliant. Ongoing manhole inspection data submissions were reviewed by H&S in the SSES with 1441 manhole inspections completed.

The smoke testing data was reviewed for inclusion in the SSES as well.

27. Rehabilitation Plan – H&S submitted the Rehabilitation Plan this quarter per the Amended Consent Decree deadline. This included the SSES chapter based upon the SSES investigative data as discussed above

28. Rehabilitation of Priority Areas of Collection System – No progress. *The rehabilitation plan is the precursor of this.*

29. Wet Weather Operation Plan – Completed.

E. Pretreatment Program

30. General Duty – In progress. The City has an approved pretreatment program and continues to regulate industrial users in the collection system.

31. Enforcement Response Plan (ERP) Implementation – In progress. The City continues to follow the ERP in order to encourage compliance from all industrial dischargers.

32. ERP - Penalty Escalation and Compliance Schedule – In progress and continuing. The City continues escalating penalties for all industries that are in significant non-compliance for a given parameter for two consecutive quarters. As penalty escalation had not been detailed in the ERP, the City has documented the process and amounts for consistency and as a reference tool.

33. ERP – Order, Permit Revocation, and Federal Referral – In progress. The City continues escalating the enforcement actions focusing on the financial

penalties assessed to permittees who remain in significant non-compliance. The City continues to confer with US EPA while attempting to have industries achieve compliance. The City continues to closely monitor an industry that has been making gradual improvements and additions to their pretreatment system. As this industry has had Long-term SNC and compliance issues, the City will continue to monitor the industry for compliance until it is achieved consistently. If progress stalls, the City will refer to US EPA.

34. Local Limit Adoption by Contributing Municipalities – In progress. All the municipalities with permitted industries have adopted the ordinance. Electronic versions of the City's sewer use ordinance had been provided to each municipality, engineer, and/or solicitor to prepare for adoption. This requirement is detailed in the revised intermunicipal agreement being reviewed and executed by the contributing municipalities. This is reiterated in the annual request for information to complete the requisite annual system operations report.

35. Non-Residential Connection Evaluation and Investigation – In progress. The City has been working with the contributing municipalities to obtain this information periodically to summarize, survey, and evaluate nonresidential users in the service area that may need to be permitted. A standardized method for routine reporting will be developed in cooperation with the municipalities under the new intermunicipal agreement.

36. Increased Monitoring for Violators – In progress and continuing. The City continues to increase City sampling and encourage increased voluntary self-monitoring for industries with violations. In general, permits may be amended or re-issued requiring multiple resamples for parameters with prior compliance issues. Some permits require increased frequency of monitoring for multiple quarters of compliance prior to returning to a less frequent self-monitoring schedule. Additional monitoring by both the City and the industry is tracked and reported annually. The merits of increased self-monitoring are routinely discussed as industries are encouraged to do so to avoid SNC and publication.

37. Pretreatment Computerized Management System - In progress and continuing. The City continues data entry into a commercial pretreatment database as well as an abbreviated spreadsheet upon receipt of analytical results from both City and industrial sampling.

38. Local Limits Re-Evaluation – Completed. Evaluation submitted to US DoJ and US EPA on May 5, 2006. Comments were received from US EPA and the City initially worked with B&V to address the comments and concerns. The City's renewed NPDES permit, effective December, 2013, includes requirements for local limits re-evaluation. The local limits sampling plan for the collection system was developed with some slight modifications to be more representative of the system as a whole and to reflect new service area additions. The City formally documented the sampling locations for a local limits site sampling plan focusing on the collection system locations. The treatment plant sampling plan locations were used as discussed previously, and the sampling and analysis has been completed. Simultaneously, the City developed and issued an RFP for local limits development and pretreatment support with proposals received October 30,

2104. After delays due to personnel issues, the selection committee planned discussion of the ranking with City Council award is anticipated shortly.

39. Quarterly SNC Reports to US EPA – In progress. With all the reports submitted for the first quarter, we were pleased that no SIUs were in SNC. For the second quarter, there were six SIUs in SNC of which only two were directly due to their analytical results. The third quarter yielded only two SIUs in SNC. While the fourth quarter increased to three SIUs in SNC, one was solely from a late third quarter violation with an industry that has an infrequent batch discharge impacting the ability to take numerous additional samples. The resample taken was in compliance but they remained in SNC. The City monitors penalty payment status and continues to investigate internal posting and reporting errors in the penalty payment status report. We have worked internally to resolve this issue as specific entries and adjustments have been identified and there are fewer errors discovered. There continue to be industries that are not current with their payment, but the specific pretreatment report is more accurate requiring less investigative reviews. The City makes follow-up calls to those who truly are delinquent in an attempt to prompt payment.

F. Funding

40. Funding – In progress. As was presented previously, the City has separated the City Retail Sewer Fund from the Sewer Fund that addresses the entire system. This accounting change allows the City to keep storm water expenses separate from sanitary sewer expenses and ensure the City is paying appropriately into the Sewer Fund for the City's retail customers per the new intermunicipal agreements. The formal separation was approved by City Council with the actual accounts being created as necessary. The retroactive inter-fund expenses transfers for 2014 were calculated and booked. The method to keep these revenue and expenses accurate in real-time has been implemented for 2015. Additionally, the City presented this accounting change to the municipalities that are under the new intermunicipal agreement and detailed how the City pays from the Retail Sewer fund into the Sewer Fund as a bulk customer with the rate calculated per the new intermunicipal agreement. These capital and operating transfers were also booked in the first quarter of 2015 for the entire year 2014.

The 2015 budget as presented to and adopted by City Council with the new fund separation has the budgeted transfer amount from the Sewer Fund to the General Fund remaining at \$3,000,000. In order to stabilize finances, this transfer will be taken periodically throughout the year.

VI. REPORTING REQUIREMENTS

41. Report Contents and Certification

- (a) **Remedial Measures Paragraphs 7 through 40** – See above numbered sections.
- (b) **Anticipated Problems** – See italics in above numbered sections.
- (c) **Additional Matters** – See italics in above unnumbered sections.

(d) Certification Statement –

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.

Ralph E. Johnson

Public Works Director

04/28/15
Date

Hazen & Sawyer

City of Reading Collection Systems Engineering Support

This Progress Report covers the period from January 1, 2015 through February 28, 2015 for engineering services related to the City of Reading Collection System Support. Please note that due to the major deadline of the Rehabilitation Plan, this report, which accompanied an invoice, only covers until this report was finalized immediately prior to submission.

Primary efforts during this time period included the following activities:

Task 1 - Hydraulic Modeling and Capacity Evaluation

- This task is complete.

Task 2 – Temporary Flow Metering

- This Task is complete.

Task 3 – Calibration of Hydraulic Model

- This task is complete.

Task 4 – I/I Evaluation

- This task is complete.

Task 5 – Capacity Analysis and Assurance

- This task is complete.

Task 6 – Condition Assessment and System Investigation

- Review and evaluation of CCTV data for Priority 1 and Priority 2 basins continued.
- Worked with the City and their lawyers in obtaining trustworthy, reliable data from the City's CCTV consultant, RedZone Robotics during this period.
- Review and evaluation of Manhole data from Mr. Rehab for Priority 1 and Priority 2 basins were completed this period.

Task 7 – Sanitary Sewer Evaluation Survey

- H&S provided the City the SSES report on December 5, 2014 and during this period incorporated comments received as Chapter 3 of the Rehabilitation Plan, of which this SSES report is a part.

Task 8 – Manhole Inspection and Evaluation

- Notice to proceed for manhole inspections was issued to Mr. Rehab for the inspection of Priority 1 and Priority 2 basin manholes (approx. 2100 MH) on October 1, 2014.
- Coordinated with Mr. Rehab on receiving the manhole inspection reports.

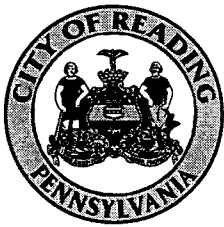
Task 9 – Rehabilitation Plan

- Reviewed 2008-09 smoke testing data.
- Worked with the City in identifying programs and implementation schedule to be made part of final plan.
- Submitted draft Rehabilitation Plan to City and others for review and comment. Incorporated comments received into the final report.

Task 13 – Technical Standards, Specifications and Construction Details

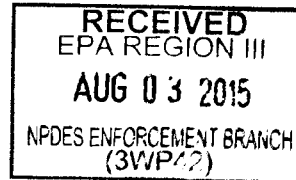
- Continued working with the City in identifying standard details and specifications needed to support work associated with rehabilitation projects.

Meetings, teleconferences and coordination with the City occurred throughout the reporting period.



CITY OF READING, PENNSYLVANIA

RALPH E. JOHNSON
PUBLIC WORKS DIRECTOR



PUBLIC WORKS
503 N. 6TH STREET
READING, PA 19601
(610) 655-6236

July 30, 2015

Certified Mail
Return Receipt Requested

Ms. Margaret L. Hutchinson, Esq.
Assistant United States Attorney
Civil Division Eastern District of Pennsylvania
615 Chestnut Street
Suite 1250
Philadelphia, PA 19106-4476

Re: City of Reading Consent Decree
Calendar Quarterly Progress Report
2nd Quarter 2015

Dear Ms. Hutchinson:

In accordance with Section VI Reporting Requirements, Paragraph 41, you will find enclosed the City of Reading's Calendar Quarterly Report. This report documents progress and status on the implementation of Section V Remedial Measures described in Paragraphs 7 through 40. Please feel free to contact me at 610-655-6236 should you have any comments or questions.

Sincerely,

Ralph E. Johnson, PE
Public Works Director

REJ/ts

Enclosure

C: Christopher A. Day, Esq., US EPA
✓ Lisa Trakis, US EPA
Shawn Arbaugh, PA DEP
Gary Hepford, PA DEP
Carole Snyder, Managing Director
Deborah A.S. Hoag, P.E., Utilities Systems Manager
David C. Stahl, P.E., Hill International
Keith Mooney, Esq., Legal Counsel
John J. Miravich, Esq., Fox Rothschild
file



**City of Reading Consent Decree
Calendar Quarterly Progress Report
Period Ending June 30th 2015**

V. REMEDIAL MEASURES

A. General Duties

7. Duty to Comply with Permit – The City's wastewater treatment plant (WWTP) was in compliance with the NPDES permit parameters.

8. Operation and Maintenance of the Facility – No change. The operation and maintenance ongoing program is implemented.

B. Interim Measures

9. Interim Compliance – Environmental Management System

(b) Maintenance Management System – No change. The WWTP computerized maintenance management system (CMMS) ongoing program is implemented.

(c) Supervisory Control and Data Acquisition (SCADA) System

1. Upgrades to the Interim SCADA System – No change. The WWTP SCADA system ongoing program is implemented and is periodically updated as appropriate.

2. Upgrades to the SCADA System – No change. This measure will be addressed under the Wastewater Treatment Plant upgrade.

(d) Pretreatment Data Management System – Continuing progress.

The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification.

10. Interim Plant Influent Monitoring – No change. The plant influent monitoring ongoing program is implemented.

11. Interim Trickling Filter Performance Measures

(a) Performance Improvements – No change. The trickling filter performance measures ongoing program is implemented.

12. Process Control Testing – No change. The process control testing ongoing program is implemented.

13. Dangerous Gas Detection – No change. The gas detection ongoing program is implemented.

14. Certified Plant Operators – No change. The ongoing 24/7 qualified supervisor coverage is implemented.

15. Operations and Maintenance Plan – No change. The operations and maintenance plan remains in place and is annually reviewed and updated as appropriate.

16. Staffing Plan – No change. The ongoing 24/7 supervisor coverage is implemented. The ongoing communication process is implemented.

17. Interim Wet Weather Operational Strategy – No change. Please see the wet weather operation plan.

C. Long Term Evaluation and Construction Schedule – In addition to the Wastewater Treatment Plant this remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning.

- The 42” flow-meter replacement project is complete.
- The 42” force main project is complete.
- The Sixth and Canal Pump Station Phase I design is moving forward. The 100% design has been completed and all comments have been incorporated. The specifications have been completed and the project is ready to be bid. Advertisement for construction is tentatively scheduled for the 3rd quarter 2015.
- The Sixth and Canal Pump Station Phase II design, which was awarded to RK&K, is proceeding. The first deliverable, which is the Preliminary Design Report, was submitted in draft form on March 25th. The document was approved and accepted.
- The Anaerobic Digester Rehabilitation project at the Wastewater Treatment Plant is proceeding. Activities occurring in the second quarter include: installation of gas piping in digester cover, application of coatings to digester cover, installation of wiring for linear motion mixer installation of motor control centers (MCCs), conduit, and wire in Digester #1, 2, & 3 Building, installation of conduit, wire, and light fixtures, installation of motor control centers (MCCs), installation of fiber reinforced plastic (FRP) system to bottom of roof slab, installation of exterior door frames and doors, installation of concrete pipe supports, installation of CMU block walls, installation of sludge piping, installation of water piping, installation of gas piping, pressure testing of sludge and gas piping, startup/testing of combination heater/heat exchangers, startup/testing of sludge recirculation pumps startup/testing of sludge recirculation pumps, installation of unit heaters UH-1 and UH-2, installation of combination heater/heat exchanger boiler flues, and installation of acid neutralization tank. Performance testing of Digester 4 is scheduled to occur in July.
- The improvements to the Fritz Island WWTP project design by Rummel, Klepper & Kahl, LLP (RK&K) is progressing. The project was originally split into two components – liquid treatment facilities upgrade and solids treatment facilities upgrade. Bids received for the liquids phase in April 2015 were rejected, necessitating a rebid of the project. It was decided to combine the liquids and solids project into one overall project for bidding purposes. Contracts and bid documents were revised to reflect these

changes. Advertisement for bids is scheduled for the 3rd quarter 2015. Since the project(s) will need to be rebid, an extension of the consent decree was requested.

- The City was awarded a low interest loan from PennVEST for the liquids portion in the amount of \$84 million. Funding for the solids portion is scheduled to be awarded in the 3rd quarter 2015.
- The City received a number of proposals Construction Management for Consent Decree Projects and, separately, for Program Management for Consent Decree Projects. The City desires to separate the two functions that are currently contained under one contract and to enhance the PM services by incorporating higher level program management coupled with coaching and guiding of City staff so that they can perform the lower level tasks. Bids are under review with an award scheduled to be announced in the 3rd quarter 2015.

18. Treatment Plant Alternatives Submission

- (a) **Existing Plant Process Evaluation Report** – No change.
- (b) **Evaluation of Treatment Alternatives Report** – There are no additional revisions to the WWTP design presently being considered. If required, an additional update to the Evaluation of Treatment Alternatives will be submitted along with an updated 537 Planning Special Study.

19. Capital Improvements Plan – No change at this time.

20. Request for Proposals – An RFP for the design of the 19th Ward Pumping Station was issued in February and an RFP was issued in March. Several bids were received in June and are currently being evaluated.

21. Permit Applications and Design – No change at this time

22. Permitting – No change at this time.

23. Construction Completion – No report.

24. Start-Up and Operation – No report.

D. Collection System

25. GIS Mapping System - In progress. See below.

(a) **Purpose of GIS System** - Not applicable.

(b) **GIS Mapping of the Sanitary Sewer Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues working to improve the accuracy of the information and ensuring the information is tracked as changes are made to the collection system impacting the GIS. The City has been using CCTV and magnetic locating as well as cross-referencing between design plans, GIS, and aerial imagery to investigate and resolve inconsistencies to update the database. Internal discussions include standard procedures for updating and maintenance of the database.

(c) **GIS Mapping of the Storm Water Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues improving the accuracy of the information and ensuring the information will be kept current as changes are made to the collection system that impacts the GIS.

26. Sanitary Sewer System Evaluation Program

(a) I/I Analysis by Subsystem

The City continued investigating and updating the mapping required for the collection system investigative, modeling, and rehabilitative work. Hazen & Sawyer continued evaluating the data from various sources to complete the evaluation of the inflow and infiltration into the City's system by subareas.

1. Baseline Flow and Rainfall – In Progress. Flow metering with rain gauges was conducted in 2005 and again from December 2013 through March 2014. All flow and precipitation data were received by Hazen & Sawyer for evaluation and inclusion.

2. Hydraulic Modeling – In Progress. Hazen & Sawyer developed the hydraulic model with a dry weather calibration using the 2005 flow data. Further calibration for wet weather was completed with the new flow, weather, and pump station data. We will arrange for a demonstration of the model upon request.

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40. Funding – In progress. As was presented previously, the City has separated the City Retail Sewer Fund from the Sewer Fund that addresses the entire system. This accounting change allows the City to keep storm water and dam expenses

separate from sanitary sewer expenses and ensure the City is paying appropriately into the Sewer Fund for the City's retail customers per the new intermunicipal agreements. The formal separation was approved by City Council with the actual accounts being created as necessary. The retroactive inter-fund expenses transfers for 2014 were calculated and booked. The method to keep these revenue and expenses accurate in real-time has been implemented for 2015. Additionally, the City presented this accounting change to the municipalities that are under the new intermunicipal agreement and detailed how the City pays from the Retail Sewer fund into the Sewer Fund as a bulk customer with the rate calculated per the new intermunicipal agreement.

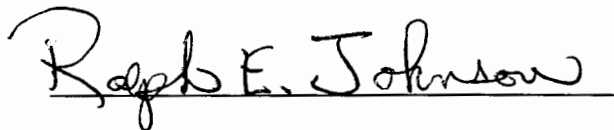
The 2016 budget was prepared for internal administrative discussion prior to submission to City Council with the new fund separation. This has the budgeted transfer amount from the Sewer Fund to the General Fund remaining at \$3,000,000. In order to stabilize finances, this transfer will be taken periodically throughout the year.

VI. REPORTING REQUIREMENTS

41. Report Contents and Certification

- (a) Remedial Measures Paragraphs 7 through 40** – See above numbered sections.
- (b) Anticipated Problems** – See italics in above numbered sections.
- (c) Additional Matters** – See italics in above unnumbered sections.
- (d) Certification Statement** –

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted, is to the best of my knowledge and belief, true, accurate, and complete.



Public Works Director

07/30/15
Date

City of Reading – Wastewater Treatment Plant Upgrades

May 2015

PM/CM Monthly Progress Report

Hill/Weston/Hazen and Sawyer

Project No. PPH—00948

Administrative Notes:

Hill International Invoice #79 Includes:
September 9, 2008;

Notice to Proceed issued on

Hazen and Sawyer Invoice: No. 078 May 2015
September 15 2008.

Project Kickoff meeting held

Executive Summary:

The Project Management/Construction Management (PM/CM) team continued work on Consent Decree related tasks as well as other supporting Wastewater Treatment Plant (WWTP) tasks. Work completed in June included:

Project Management (Hill):

- Completed draw schedule submission – addressed questions from City’s financial consultant. Met with the City, RKK and FR in Reading regarding the liquid bid and the combining of the liquids with the solids contracts into one procurement.

WWTP Design Oversight – Bid Ready (H&S: also see invoice)

- Provided input on consolidating liquids and solids bid packages into a single set of documents
- Provided input on the inclusion of PLA

Sixth and Canal Pump Station Design Oversight (H&S: also see invoice)

- Provided input on the number of prime contracts
- Provided input on the inclusion of the PLA
- Coordination with RKK, City, and PM/CM Team

Secondary Digesters CM Services (Hill):

- On site construction management services
- Review of contractor proposed change orders
- Review of outstanding contractor submittals, including baseline schedule, and applications for payment
- Prepared and conducted project meetings

Nineteenth Ward Pump Station Design RFP (H&S also see invoice)

- Developed draft responses for proposers’ questions and submitted those to the City on June 2 2015.

Anticipated work for July includes: Putting the solids/liquids combined project and the 6CPS project out for procurement, ongoing project management/controls tasks integrating the effort.

Hazen & Sawyer City of Reading Collection Systems Engineering Support

This report covers the period from March 1, 2015 through June 30, 2015 for engineering services related to the City of Reading Collection System Support. Please note that the prior quarter report was finalized immediately prior to the submission of the Rehabilitation Plan.

Primary efforts during this time period included the following activities:

Task 1 - Hydraulic Modeling and Capacity Evaluation

- Continued capacity evaluation of the City's interceptors including the connection point's from contributing municipalities for the development of an in-house tool.
- Meetings, teleconferences and coordination with the City occurred throughout the reporting period.

Task 5 – Capacity Analysis and Assurance

- Continued capacity evaluation of the City's interceptors including the connection point's from contributing municipalities for the development of an in-house tool

Task 9 – Rehabilitation Plan

- Completed and delivered the draft rehabilitation plan to the PADEP, USEPA and USDOJ on March 2, 2015

Task 12 – GIS CMMS

- Updates were performed as needed to support the Rehabilitation Plan.

Task 13 – Technical Standards, Specifications and Construction Details

- Progressed the standard details and specifications to support work associated with rehabilitation projects.



CITY OF READING, PENNSYLVANIA

PUBLIC WORKS
503 N. 6TH STREET
READING, PA 19601
(610) 655-6236

RALPH E. JOHNSON
PUBLIC WORKS DIRECTOR

October 28, 2015

Certified Mail
Return Receipt Requested

Ms. Margaret L. Hutchinson, Esq.
Assistant United States Attorney
Civil Division Eastern District of Pennsylvania
615 Chestnut Street
Suite 1250
Philadelphia, PA 19106-4476

Re: City of Reading Consent Decree
Calendar Quarterly Progress Report
3rd Quarter 2015

Dear Ms. Hutchinson:

In accordance with Section VI Reporting Requirements, Paragraph 41, you will find enclosed the City of Reading's Calendar Quarterly Report. This report documents progress and status on the implementation of Section V Remedial Measures described in Paragraphs 7 through 40. Please feel free to contact me at 610-655-6236 should you have any comments or questions.

Sincerely,

A handwritten signature in black ink that reads "Ralph E. Johnson". The signature is written in a cursive style.

Ralph E. Johnson, PE
Public Works Director

RJ/ts

Enclosure

C: Christopher A. Day, Esq., US EPA
Lisa Trakis, US EPA
Gary Hepford, PA DEP
Victor Landis, PA DEP
Carole Snyder, Managing Director
Deborah A.S. Hoag, P.E., Utilities Systems Manager
David C. Stahl, P.E., Hill International
Keith Mooney, Esq., Legal Counsel
John J. Miravich, Esq., Fox Rothschild
file



FAX: (610) 655-6697 TDD: (610) 655-6442

**City of Reading Consent Decree
Calendar Quarterly Progress Report
Period Ending September 30th 2015**

V. REMEDIAL MEASURES

A. General Duties

7. Duty to Comply with Permit – The City's wastewater treatment plant (WWTP) was in compliance with the NPDES permit parameters.

8. Operation and Maintenance of the Facility – No change. The operation and maintenance ongoing program is implemented.

B. Interim Measures

9. Interim Compliance – Environmental Management System

(b) Maintenance Management System – No change. The WWTP computerized maintenance management system (CMMS) ongoing program is implemented.

(c) Supervisory Control and Data Acquisition (SCADA) System

1. Upgrades to the Interim SCADA System – No change. The WWTP SCADA system ongoing program is implemented and is periodically updated as appropriate.

2. Upgrades to the SCADA System – No change. This measure will be addressed under the Wastewater Treatment Plant upgrade.

(d) Pretreatment Data Management System – Continuing progress. The City continues the use of a commercial pretreatment database as well as an abbreviated spreadsheet for simplicity and verification. See additional information in 37 below.

10. Interim Plant Influent Monitoring – No change. The plant influent monitoring ongoing program is implemented.

11. Interim Trickling Filter Performance Measures

(a) Performance Improvements – No change. The trickling filter performance measures ongoing program is implemented.

12. Process Control Testing – No change. The process control testing ongoing program is implemented.

13. Dangerous Gas Detection – No change. The gas detection ongoing program is implemented.

14. Certified Plant Operators – No change. The ongoing 24/7 qualified supervisor coverage is implemented.

15. Operations and Maintenance Plan – No change. The operations and maintenance plan remains in place and is annually reviewed and updated as appropriate.

16. Staffing Plan – No change. The ongoing 24/7 supervisor coverage is implemented. The ongoing communication process is implemented.

17. Interim Wet Weather Operational Strategy – No change. Please see the wet weather operation plan.

C. Long Term Evaluation and Construction Schedule – In addition to the Wastewater Treatment Plant this remedial measure reporting includes activities associated with pump stations, force mains and Act 537 planning.

- The 42” flow-meter replacement project is complete.
- The 42” force main project is complete.
- The Sixth and Canal Pump Station Phase I design is moving forward. The 100% design has been completed and all comments have been incorporated. The specifications have been completed and the project is ready to be bid. Advertisement for construction is tentatively scheduled for the 4th quarter 2015.
- The Sixth and Canal Pump Station Phase II design is moving forward. The first deliverable, which is the Preliminary Design Report, was submitted and accepted. Alternatives are currently being evaluated.
- The Anaerobic Digester Rehabilitation project at the Wastewater Treatment Plant is proceeding. Performance testing of Digester 4 was successfully conducted in July, after which the WWTP resumed operational control of Digester 4. This essentially concluded the rehabilitation of Digester #4. Activities occurring in the third quarter included general construction activities of the Digester Control Building. Activities associated with the rehabilitation of Digester #5 consisted of sludge removal and disposal, cutting of digester roof plates, , removal of roof plates and counter weights and demolished perlite concrete insulation from digester cover, lifting cover out of digester, and structural steel modifications of digester cover.
- The improvements to the Fritz Island WWTP project design by Rummel, Klepper & Kahl, LLP (RK&K) is progressing. The project was originally split into two components – liquid treatment facilities upgrade and solids treatment facilities upgrade. Bids received for the liquids phase in April 2015 were rejected, necessitating a rebid of the project. It was decided to combine the liquids and solids project into one overall project for bidding purposes. Contracts and bid documents were revised to reflect these changes. Advertisement for bids occurred on September 17th. Since the project(s) was rebid, an extension of the consent decree was requested and granted. The City was awarded two low interest loans from PennVEST for the liquids and solids portion in the total amount of \$129 million.

- The selection of a design firm for upgrades to the 19th Ward Pumping Station and Force Main is proceeding. Potential design firms were interviewed and a final selection is scheduled to occur in October.
- The City awarded the contract Construction Management for Consent Decree Projects to Hazen and Sawyer and Weston Solutions. The contract for Program Management was awarded to Hazen and Sawyer.

18. Treatment Plant Alternatives Submission

- (a) **Existing Plant Process Evaluation Report** – No change.
- (b) **Evaluation of Treatment Alternatives Report** – There are no additional revisions to the WWTP design presently being considered. If required, an additional update to the Evaluation of Treatment Alternatives will be submitted along with an updated 537 Planning Special Study.

19. Capital Improvements Plan – No change at this time.

20. Request for Proposals – No RFPs have been issued at this time.

21. Permit Applications and Design – No change at this time

22. Permitting – No change at this time.

23. Construction Completion – No report.

24. Start-Up and Operation – No report.

D. Collection System

25. GIS Mapping System - In progress. See below.

(a) **Purpose of GIS System** - Not applicable.

(b) **GIS Mapping of the Sanitary Sewer Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues working to improve the accuracy of the information and ensuring the information is tracked as changes are made to the collection system impacting the GIS. The City has been using CCTV and magnetic locating as well as cross-referencing between design plans, GIS, and aerial imagery to investigate and resolve inconsistencies to update the database. Internal discussions include standard procedures for updating and maintenance of the database as well as additional field verification when upgrades and construction require it.

(c) **GIS Mapping of the Storm Water Collection System** – Certified and continuing. The City transmitted a certification for the functionality of the GIS on June 28, 2013. The City continues improving the accuracy of the information and ensuring the information will be kept current as changes are made to the collection system that impacts the GIS. Updating and maintenance are important as discussed above.

26. Sanitary Sewer System Evaluation Program

(a) **I/I Analysis by Subsystem**

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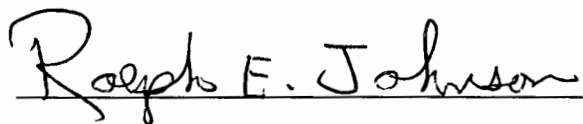
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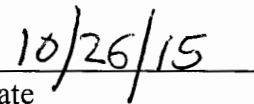
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Public Works Director


Date